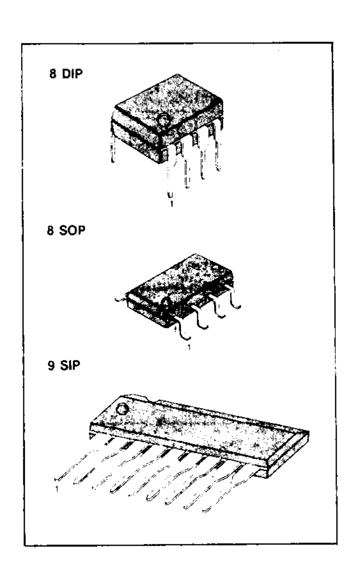
LOW VOLTAGE AUDIO POWER AMPLIFIER

The KA386/S/D is a power amplifier designed for use in low voltage consumer applications. The gain is internally set to 20 to keep the external part count low, but the addition of an external resistor and capacitor between Pins 1 and 8 will increase the gain to any value up to 200.



FEATURES

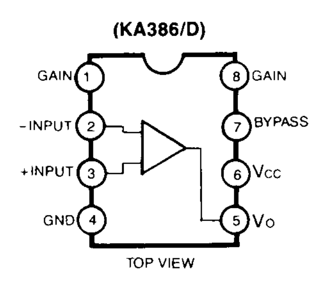
- Battery operation.
- Minimum external parts.
- Wide supply voltage range: 4V ~ 12V (KA386)
  4V ~ 9V (KA386S/D)
- Low quiescent current drain (4mA.)
- Voltage gains : 20 ~ 200.
- Ground referenced input.
- Self-centering output quiescent voltage.
- Low distortion.
- 3 kinds of package types
  KA386 (8 Dip), KA386S (9 Sip), KA386D (8 Sop)

ORDERING INFORMATION

Device	Package	Operating Temperature
KA386	8 DIP	-20°C ~ +70°C
KA386S	9 SIP	
KA386D	8 SOP	

BLOCK DIAGRAM

(KA386/D)



(KA386S)

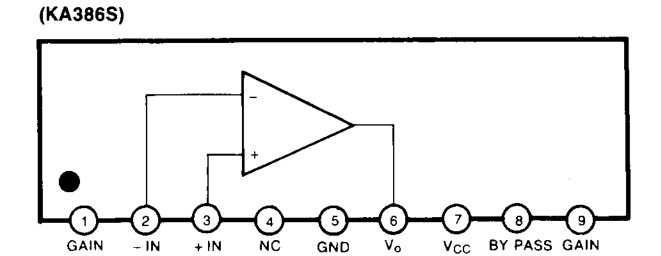


Fig. 1



ABSOLUTE MAXIMUM RATINGS ($T_a = 25°C$)

Characteristic		Symbol	Value	Unit
Supply Voltage		V_{CC}	15	V
Power Dissipation	KA386	P_D	660	mW
	KA386S		500	
	KA386D		300	
Input Voltage		V_I	±0.4	V
Operating Temperature		T_{OPR}	−20 ~ +70	°C
Storage Temperature		T_{STG}	−40 ~ +125	°C

ELECTRICAL CHARACTERISTICS

($T_a = 25°C$, $V_{CC} = 6V$, $R_L = 8\Omega$, f = 1KHz, unless otherwise specified)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescient Circuit Current	I_{CCQ}	$V_I = 0$		4	8	mA
Output Power	P_o	$V_{CC} = 6V$, THD = 10%	250	325		mW
		$V_{CC} = 9V$, THD = 10%	500	700		mW
Voltage Gain	G_V	Pins 1 and 8 Open		26		dB
		10μF from Pin 1 to 8		46		
Bandwidth	BW	Pins 1 and 8 Open		300		KHz
		10μF from Pin 1 to 8		60		
Total Harmonic Distortion (D-Type)	THD	$P_o = 125mW$, Pins 1 and 8 Open		0.2		%
Input Resistance	R_I			50		KΩ
Input Bias Current	I_{BIAS}	Pins 1 and 8 Open		250		nA

APPLICATION CIRCUIT

Amplifier with Gain=50 (34 dB)

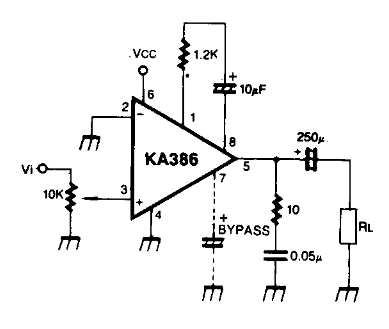


Fig. 2